DOINGWHATWORKS

Audio

FULL DETAILS AND TRANSCRIPT

Engaging and Encouraging Students

Claxton Middle School, Georgia • May 2008

Topic: National Math Panel: Critical Foundations for Algebra
Practice: Comprehensive Instruction

Highlights

- Techniques for engaging struggling students
- Examples of using manipulatives for teaching cross-sections, the coordinate system, and surface area
- Use of peer tutors
- Praise-prompt-leave strategy and how it builds persistence

About the Site

Claxton Middle School

Claxton, GA

Demographics

47% Black

41% White

12% Hispanic

75% Free or Reduced-Price Lunch

4% English Language Learners

17% Special Education

Claxton has implemented strategies geared toward ensuring that students receive intensive support to master skills including:

- Hands-on practical demonstrations and activities that engage students who are struggling with mathematics,
- Praise-prompt-leave strategy for encouraging struggling students,
- Various types of formative assessments in daily use,
- Consistent use of the six elements of an effective mathematics lesson and Tennessee Instructional method,
- Philosophy of 100% correction of mistakes,
- Four-tier pyramid of interventions and technology-based prescriptive remediation, and
- Fluid movement of students across supports based on frequent assessments; daily 90-minute period for re-teaching of mathematics

Full Transcript

My name is Stephanie Mackiewicz. I am from Claxton Middle School and I teach 7th grade math. If I found that there is a group of my students that are really struggling, what I would try to do is make sure that I am incorporating various techniques in my instruction. We try to use various techniques when we are introducing a skill or a topic. For example, when we taught cross-sections, we introduced it using Play-Doh.

We wanted to use a manipulative so that the students could concretely see what we were doing. We took Play-Doh and they sliced the Play-Doh with dental floss or fishing line; and so they could clearly see that a vertical cross-section of a cube, for example, obviously is a square; or a perpendicular to the base cross-section of a cone is a triangle. So we showed them that, we went through eight 3-D figures that were formed out of Play-Doh. The students loved it. And we did, with every solid, we cut vertically or we cut perpendicular to the base that we saw that cross-section and we also went horizontal to the base. And as we moved on and went deeper with the topic, we went more abstract, but the clay was always available for the students to scaffold them along. We kept the clay out and available for the kids at any time.

When we introduced the coordinate system, we actually set our room up as a coordinate plane and we had the four quadrants in our room. So a lot of times we needed some students to turn their paper in, we could say, "Okay, quadrant three, if you will turn your papers in," just something as simple as that, where they have to think, "Okay, what quadrant am I in?" We also played some games with that: They would have to run to quadrant two, or they would have to run to a quadrant where the first coordinate was negative and the second coordinate was positive—so we had a lot of fun with that.

When we taught surface area, the first time we introduced it, we used formulas, and the students were having a really hard time with that, they just couldn't grasp learning it with formulas. So, we totally stopped what we were doing and we introduced surface area using nets, and we showed the students that a rectangular prism has six faces and we laid out the nets and we showed them to find the area of each face and then add them all up and that gives you total surface area.

If a way that we initially present a material is not working, we try to present it in another way. Sometimes, if what I am saying is not clear to the students and I know that a couple of students are mastering it; sometimes I will let them explain it and if they can reach the students, then that's what we are here for, we are here to do whatever we can to help the students. Sometimes we use students that have mastered the skill and we pair them up with a student who is struggling as a peer tutor, and that actually helps both involved, because when I teach something, I am learning it better and I am going to retain it, so it's helping both parties.

I encourage struggling students by praise, prompting, and leave; I use that strategy. It helps them become more accountable and not rely on us too, too terribly much. We provide them the support and the scaffolding needed to get them to the next step on their own. And the praise-prompt-leave strategy gives them confidence that they have succeeded, even if partially. We want to prompt them and give them a little bit of encouragement, but, you know, tell them, "I will be right back to help you," walk away so that they can struggle, because it is important for them to struggle a little bit so that they are growing, and then we come back and then give them the praise if they have, you know, figured the problem out on their own or just give them encouragement, "Come on, you can do it, I know you can do it."